

Appendix E

GEOTECHNICAL REQUIREMENTS

1.0 Geotechnical Information - COE Prepared

1.1 General Procedure. Results of foundation investigations, relevant geological data, seismic design criteria, foundation design criteria, and pavement design sections are normally provided to the A-E by the District's Geotechnical Branch in the form of Geotechnical Reports. Two geotechnical reports generally will be provided. The first, a preliminary report (informal) which presents general foundation and pavement design criteria, will be provided about four weeks after the Geotechnical Branch has been notified to begin work. The second, the Final Geotechnical Report which presents site specific design criteria and recommendations will be provided after explorations and laboratory testing are completed, and no later than two weeks after the designer has been given notice to begin final design. The A-E will provide an additional site plan "mylar" with the concept or early preliminary submittal on which the actual exploration program will be based and the location of explorations will be shown. The approved site plan shall show the existing topography and structures, coordinate grid system, and location of major design features.

1.2 The District will provide the A-E, for incorporation into the Contract Drawings, a sheet(s) on which the actual exploration locations are depicted and subsurface exploration logs are shown. If requested, the Geotechnical Report will also include percolation rates, resistivity readings, corrosion potential, and shear wave velocities of the subsurface materials. The A-E shall utilize the geotechnical information and design criteria provided to complete the preparation of the project's design documents.

1.3 In addition to the previous information, the District's Geotechnical Branch will provide "Engineering Considerations and Instructions for Field Personnel" for the geotechnical portions of the project for inclusion in the A-E prepared report of the same title.

1.4 Airfield Pavements. For all projects involving design of airfield pavements, the District's Geotechnical Branch will furnish the following for incorporation by the A-E into the project documents:

1.4.1 Sketches of pavement sections for the project, including types and thicknesses of surface and base materials, and lateral limits of each type.

1.4.2 Sketches of the geometric layout of all joints and sections of all the joints showing configuration and sealing details.

1.4.3 Sketches of subdrains (if required for the project) showing general location and typical sections and guidance criteria as required.

1.4.4 Draft specifications (guide specifications marked up for the specific project) for inclusion by the A-E into the construction contract documents for the following items of work:

1.4.4.1 Demolition (if required).

- 1.4.4.2 Clearing and Grubbing (if required).
- 1.4.4.3 Excavation, Embankment, and Subgrade Preparation.
- 1.4.4.4 Subdrainage system (if required).
- 1.4.4.5 Base materials.
- 1.4.4.6 Surfacing.
- 1.4.4.7 Joint sealing (if required).
- 1.4.4.8 Pavement repairs (if required).

2.0 Geotechnical information - A-E Prepared

2.1 Generally, all geotechnical investigations will be conducted by the Corps of Engineers Geotechnical Branch. However, when geotechnical investigations are performed as part of the A-E design contract, such information shall be obtained by a competent and reputable geotechnical firm specializing in such work. Adequate subsurface information will be obtained and presented for use by designers of structures, grading, drainage, disposal fields, and other design features meeting the District's criteria. Prior to negotiation of the contract, the A-E will furnish recommendations as to extent and type of subsurface investigation the geotechnical firm proposes. Scope of these services will be agreed upon and they will become a part of the A-E design contract. The A-E will discuss results of the geotechnical investigations with Construction-Operation's Quality Assurance specialists and the Sacramento District's Geotechnical Branch specialist in foundation and materials design. Field and laboratory operations will be subject to inspections by COE as considered appropriate. The A-E shall prepare location and logs of exploration sheet(s) to include into the contract drawings. Finally, the A-E shall prepare Engineering Considerations and Instructions for Field Personnel report also. (See Appendix B for information on what to include in this report.)